CLAIMS

1. A steel for exhaust gas processing equipment excellent in wear resistance, containing, by mass%,

C: 0.001 to 0.2%,

Cu: 0.1 to 1%,

Ni: 0.01 to 0.5%,

Cr: 4.0 to 9.0%, and

Sb: 0.01 to 0.2% and

containing one or both of

Mo: 0.005 to 0.5% and

W: 0.005 to 0.5% and

the balance of Fe and unavoidable impurities.

2. A steel for exhaust gas processing equipment excellent in wear resistance, containing, by mass%,

C: 0.001 to 0.2%,

Si: 0.01 to 0.5%,

Mn: 0.1 to 2%,

Cu: 0.1 to 1%,

Ni: 0.01 to 0.5%,

Cr: 4.0 to 6.0%,

Sb: 0.01 to 0.2%,

P: 0.05% or less, and

S: 0.005 to 0.02% and

containing one or both of

Mo: 0.005 to 0.5% and

W: 0.005 to 0.5% and

the balance of Fe and unavoidable impurities.

3. A steel for exhaust gas processing equipment as set forth in claim 1 or 2, wherein said exhaust gas processing equipment is an exhaust gas duct.

4. A steel for exhaust gas processing equipment excellent in wear resistance and gas cutting property containing, by mass%,

C: 0.001 to 0.2%,

Si: 0.01 to 0.5%,

Mn: 0.1 to 2%,

Cu: 0.1 to 1%,

Ni: 0.01 to 1%,
Cr: 4.0 to 6.0%,
Sb: 0.01 to 0.2%,
Al: 0.005 to 0.5%,
P: 0.05% or less,
S: 0.005 to 0.02%, and
N: 0.008% or less and
containing one or both of
Mo: 0.005 to 0.5% and
W: 0.005 to 0.5% and
the balance of Fe and unavoidable impurities.

5. A steel for exhaust gas processing equipment excellent in wear resistance and gas cutting property as set forth in claim 4 further containing, by mass%, one or more of

Nb: 0.002 to 0.2%,
V: 0.005 to 0.5%,
Ti: 0.002 to 0.2%,
Ta: 0.005 to 0.5%,
Zr: 0.005 to 0.5%, and
B: 0.0002 to 0.005% and
the balance of Fe and unavoidable impurities.

6. A steel for exhaust gas processing equipment excellent in wear resistance and gas cutting property as set forth in claim 4 or 5 further containing, by mass%, one or more of

Mg: 0.0001 to 0.01%,
Ca: 0.0005 to 0.01%,
Y: 0.0001 to 0.1%,
La: 0.005 to 0.1%, and
Ce: 0.005 to 0.1% and
the balance of Fe and unavoidable impurities.

7. A steel for exhaust gas processing equipment excellent in wear resistance and gas cutting property as set forth in any one of claims 4 to 6 further containing, by mass%, one or both of

Sn: 0.01 to 0.3% and

Pb: 0.01 to 0.3% and

the balance of Fe and unavoidable impurities.

8. An exhaust gas duct wherein a gas contact surface of a passage of exhaust gas in the exhaust gas duct is comprised of steel containing, by mass%,

C: 0.001 to 0.2%,

Cu: 0.1 to 1%,

Ni: 0.01 to 0.5%,

Cr: 4.0 to 9.0%, and

Sb: 0.01 to 0.2% and

containing one or both of

Mo: 0.005 to 0.5% and

W: 0.005 to 0.5% and

the balance of Fe and unavoidable impurities, and welded together by an austenitic welding material.

9. An exhaust gas duct wherein a gas contact surface of a passage of exhaust gas in the exhaust gas duct is comprised of a double-layer steel having as a surface layer of said steel containing, by mass%,

C: 0.001 to 0.2%,

Cu: 0.1 to 1%,

Ni: 0.01 to 0.5%,

Cr: 4.0 to 9.0%, and

Sb: 0.01 to 0.2% and

containing one or both of

Mo: 0.005 to 0.5% and

W: 0.005 to 0.5% and

the balance of Fe and unavoidable impurities, and welded together at its surface layer by an austenitic welding material.

10. An exhaust gas duct wherein a gas contact surface of a passage of exhaust gas in the exhaust gas duct is comprised of a steel containing, by mass%,

C: 0.001 to 0.2%,

Si: 0.01 to 0.5%,

Mn: 0.1 to 2%,

Cu: 0.1 to 1%,

Ni: 0.01 to 0.5%,
Cr: 4.0 to 6.0%,
Sb: 0.01 to 0.2%,
P: 0.05% or less, and
S: 0.005 to 0.02% and

containing one or both of

Mo: 0.005 to 0.5% and
W: 0.005 to 0.5% and

the balance of Fe and unavoidable impurities and a welding metal in a composition range of the same as said steel.

11. An exhaust gas duct as set forth in any one of claims 8 to 10, wherein said exhaust gas duct is a double-wall tube type water-cooled exhaust gas duct which is comprised of a metal outside tube and metal inside tube where the inside of the inside tube is used as the passage of the exhaust gas and the gap between the outside tube and the inside tube is used as the passage of the coolant.

12. An exhaust gas duct as set forth in any one of claims 8 to 10, wherein said exhaust gas duct is an exhaust gas duct where a plurality of tubes are joined and arranged at an opposite surface of the passage of the exhaust gas from the gas contact surface and has the function of circulating a coolant through said tubes.